

ABSTRACT

High performance MEMS thin film electret microphones, components and methods for making the same are disclosed. The microphones generally include a transducer diaphragm including  
5 an IC-compatible membrane support structure, a membrane layer formed on the membrane support structure, and a first electrode; a transducer back plate having a second electrode; and an electret layer formed on at least one of the transducer diaphragm or the transducer back plate. The transducer  
10 diaphragm and transducer back plate are fabricated using micromachining techniques and are generally compatible with microelectronics. The microphones generally have high open-circuit sensitivities, low noise levels, and low total harmonic distortion.

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